

## CLAIMS

What is claimed is:

1. A method of controlling a plurality of automated guided vehicles operated on a single guide path, comprising:

    assigning work to another automated guided vehicle waiting for work when there is a conveyance request;

    determining whether an automated guided vehicle moving to a working location exists on the guide path;

    reading information on current and working locations of the automated guided vehicles if the automated guided vehicle moving to the working location exists on the guide path;

    determining whether simultaneous movements are possible based on the read information; and

    moving the automated guided vehicle waiting for work if the simultaneous movements are possible.

2. The method as set forth in claim 1, further comprising:

    determining whether there is a possibility of the automated guided vehicles interfering with each other based on the read information; and

    determining whether the simultaneous movements are possible according to the current locations and working locations of the automated guided vehicles, a distance between the working locations of the automated guided vehicles, and moving directions of the automated guided vehicles, if the possibility exists.

3. The method as set forth in claim 2, wherein it is determined that the simultaneous movements are possible if the distance between the working locations of the automated guided vehicles is longer than a predetermined distance, the moving directions of the automated guided vehicles are the same, and the working location of the automated guided vehicle moving to the working location exists on a path of the automated guided vehicle waiting for work.

4. The method as set forth in claim 2, wherein the automated guided vehicle waiting for work is moved to a predetermined location if it is determined that the simultaneous movements are impossible.

5. An automated guided vehicle control system, comprising:

a plurality of automated guided vehicles operated on a single guide path;

a host computer to transmit a conveyance request to move articles from a predetermined loading location to a predetermined unloading location using one of the automated guided vehicles; and

a control unit to assign work to the automated guided vehicle waiting for work according to the conveyance request from the host computer, to read information on current locations and working locations of the automated guided vehicles if the automated guided vehicles moving to a working locations exist, to determine that simultaneous movements are possible based on the read information, and to move the automated guided vehicle waiting for work to a working location thereof if the simultaneous movements are possible.

6. The automated guided vehicle control system as set forth in claim 5, wherein the control unit determines whether the simultaneous movements are possible based on the read information on the current locations and working locations of the automated guided vehicles and moving directions of the automated guided vehicles.

7. The automated guided vehicle control system as set forth in claim 6, wherein the control unit determines that the simultaneous movements are possible if the distance between the working locations of the automated guided vehicles is longer than a predetermined distance, the moving directions of the automated guided vehicles are the same, and the working location of the automated guided vehicle moving to the working location exists on a path of the automated guided vehicle waiting for work.

8. The automated guided vehicle control system as set forth in claim 6, wherein the control unit moves the automated guided vehicle waiting for work to a location spaced apart by a predetermined distance from the working location if it is determined that the simultaneous movements are impossible.

9. A method of controlling a plurality of automated guided vehicles operated on a single guide path, comprising:

assigning work to an automated guided vehicle waiting for work on the guide path while at least one other automated guided vehicle moving to a working location exists on the guide path; and

moving the automated guided vehicle waiting for work to perform the assigned work

whenever it is determined that simultaneous movements of both the automated guided vehicle waiting for work and the automated guided vehicle moving to a working location are possible without interference between the two automated guided vehicles.

10. The method as set forth in claim 9, wherein the determining operation includes reading information on current and working locations of the automated guided vehicles if the automated guided vehicle moving to the working location exists on the guide path.

11. An automated guided vehicle control system, comprising:  
a plurality of automated guided vehicles operated on a single guide path;  
a host computer to transmit a conveyance request to move articles from a predetermined loading location to a predetermined unloading location using one of the automated guided vehicles; and  
a control unit to assign work to one of the automated guided vehicles waiting for work according to the conveyance request from the host computer and to move the automated guided vehicle waiting for work to a working location thereof whenever it is determined that simultaneous movements of the automated guided vehicle waiting for work and an automated guided vehicle already moving to a working location are possible without interference between the two automated guided vehicles.

12. The automated guided vehicle control system as set forth in claim 11, wherein the control unit determines whether the simultaneous movements are possible based on the current locations and working locations of the automated guided vehicles and moving directions of the automated guided vehicles.

13. The automated guided vehicle control system as set forth in claim 12, wherein the control system determines that the simultaneous movements are possible, if the distance between the working locations of the automated guided vehicles is longer than a predetermined distance, the moving directions of the automated guided vehicles are same, and the working location of the automated guided vehicle moving to the working location exists on a path of the automated guided vehicle waiting for work.

14. The automated guided vehicle control system as set forth in claim 12, wherein the control unit moves the automated guided vehicle waiting for work to a location spaced apart by

a predetermined distance from the working location if it is determined that the simultaneous movements are impossible.